



UNITED STATES PATENT AND TRADEMARK OFFICE

80
UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,645	10/24/2003	Dale K. Hitt	DSI-P105	8624
32566	7590	07/20/2005	EXAMINER	
PATENT LAW GROUP LLP 2635 NORTH FIRST STREET SUITE 223 SAN JOSE, CA 95134				SHECHTMAN, SEAN P
ART UNIT		PAPER NUMBER		
		2125		

DATE MAILED: 07/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/692,645	HITT ET AL.
	Examiner Sean P. Shechtman	Art Unit 2125

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 22 June 2005.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-21 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-21 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 22 June 2005 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

<ol style="list-style-type: none"> 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>6/22/05</u>. 	<ol style="list-style-type: none"> 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____. 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) 6) <input type="checkbox"/> Other: _____.
---	---

DETAILED ACTION

1. Claims 1-21 are presented for examination. Claims 1, 11, and 17-21 have been amended.

Priority

2. Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 119(e) as follows:

If the application is a utility or plant application filed under 35 U.S.C. 111(a) on or after November 29, 2000, the specific reference to the prior application must be submitted during the pendency of the application and within the later of four months from the actual filing date of the application or sixteen months from the filing date of the prior application. If the application is a utility or plant application which entered the national stage from an international application filed on or after November 29, 2000, after compliance with 35 U.S.C. 371, the specific reference must be submitted during the pendency of the application and within the later of four months from the date on which the national stage commenced under 35 U.S.C. 371(b) or (f) or sixteen months from the filing date of the prior application. See 37 CFR 1.78(a)(2)(ii) and (a)(5)(ii). This time period is not extendable and a failure to submit the reference required by 35 U.S.C. 119(e) and/or 120, where applicable, within this time period is considered a waiver of any benefit of such prior application(s) under 35 U.S.C. 119(e), 120, 121 and 365(c). A benefit claim filed after the required time period may be accepted if it is accompanied by a grantable petition to accept an unintentionally delayed benefit claim under 35 U.S.C. 119(e), 120, 121 and 365(c). The petition must be accompanied by (1) the reference required by 35 U.S.C. 120 or 119(e) and 37 CFR 1.78(a)(2) or (a)(5) to the prior application (unless previously submitted), (2) a surcharge under 37 CFR 1.17(t), and (3) a statement that the entire delay between the date the claim was

due under 37 CFR 1.78(a)(2) or (a)(5) and the date the claim was filed was unintentional. The Director may require additional information where there is a question whether the delay was unintentional. The petition should be addressed to: Mail Stop Petition, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Drawings

3. Objections withdrawn due to the amendment.

Specification

4. Objections withdrawn due to the amendment.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1-16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Referring to claims 1 and 11, the original specification fails to provide enablement for a sensing circuit coupled to detect an assertion and deassertion of the first valve by the irrigation controller. The original specification teaches that the "sensing circuit 1308 is coupled to the common line and the system monitors the start and stop times of each zone by measuring the voltage and/or current on the "common line" of the valves", wherein "the sensing circuit detects the assertion and deassertion of the valves by measuring the voltage and/or current on the

common line of the valves.” The original specification fails to teach a sensing circuit coupled to detect an assertion and deassertion of the first valve by the irrigation controller, and one of ordinary skill in the art would not know how make or use a sensing circuit coupled to detect an assertion and deassertion of the first valve by the irrigation controller.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 11 require the limitation of “the controller providing a control signal”, however, claims 1 and 11 provide for an irrigation controller and a controller prior to this limitation. Therefore, it is not clear which controller is “the controller”.

Referring to claims 1 and 11, it is not clear what detects an assertion and deassertion of the first valve, - a sensing circuit or the irrigation controller?

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 1-21 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by U.S. Pub. No. 2004/0090329 to Hitt or U.S. Pub. No. 2004/0090345 to Hitt or U.S. Pub. No. 2004/0100394 to Hitt. See figures 13-14 and the description thereof, which are the same figures and description used to provided enablement for claims 1-21 of the instant application.

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

8. Claims 1-3, 5, and 7-21 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Pat. No. 4,811,221 to Sturman.

Referring to claims 1, 11, Sturman teaches a control system for an automatic sprinkler system (Abstract; Col. 10, lines 25-28), the automatic sprinkler system including an irrigation controller having a control line and a common line coupled to control a valve configured to irrigate an area (See Fig. 8 or 10), the control system comprising:

a relay coupled in series with the common line (See upper right circuit of Fig. 8 or 10);
a sensing circuit coupled to detect an assertion and deassertion of the valve by the irrigation controller (Col. 8, lines 18-56; Figs. 8 and 9a, element 36); and
a controller coupled to receive a control data (Col. 10, lines 7-24), the controller providing a control signal to enable the relay based on the control data (Col. 10, lines 60-65; Col. 11, claims 8-10), wherein the relay is turned on or off based on the control data for controlling an on/off duration of the valve (Figs. 8 or 10; Col. 6, lines 40-41; Col. 6, line 40 – Col. 7, line 42; Col. 11, claims 1-7).

The relay is shown as the upper right circuit controlled by the microprocessor in figures 8 or 10. Clearly, this circuit is connected in series with the common line shown at the bottom of this circuit. During programming the microcomputer detects whether or not the on/off switch is a first switch depression (a valve turn on signal) or a second switch depression (a valve turn off signal) (Col. 8, lines 18-56; Figs. 8 and 9a, element 36). Sturman clearly teaches the microcomputer receives control data in verifying the need to turn the valve, wherein the control data is from, among other things, at least a moisture sensor stuck in the lawn or garden, (Col. 10, lines 7-24), wherein the microcomputer is clearly responsive to the conditions from the sensor to control the relay (Col. 10, lines 60-65; Col. 11, claims 8-10). The examiner respectfully submits that the use of the pushbutton switch in programming the microcomputer to control the relay described in column 9 or column 8 or claims 1-7 of Sturman is also control data received by the controller used to enable the relay based on the control data. Clearly the microprocessor enables or disables the relay through output pin 20 of output port 5 (Figs. 8 or 10; Col. 6, lines 40-41). The high output state of the microprocessor represents the valve on condition and the low output state represents the valve off condition (Col. 7, lines 28-30). The coil 88 responds to the voltage or current change from the output of the microcomputer to control the valve on or off (Col. 6, line 40 – Col. 7, line 42), wherein this is accomplished for a specified duration programmed in the microcomputer (Col. 8; Col. 11, claims 1-7).

The claims, as such, do not require that a controller be the same or different from the irrigation controller. The claims, as such, do not require that the control system be the same or different from the irrigation controller or controller. The claims, as such, do not require a

specified time when detection of the assertion and deassertion of the valve occurs. Furthermore, nothing is required to be performed automatically.

The recitation a control system for an automatic sprinkler system, the automatic sprinkler system including an irrigation controller having a control line and a common line coupled to control a valve configured to irrigate an area, has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Referring to claims 2, 12, Sturman teaches the control system of claim 1, wherein the control data comprises a data from *one of* a soil moisture sensor (Col. 10, lines 7-24), a temperature sensor, a relative humidity sensor, a light level sensor, a dissolved oxygen sensor.

Referring to claims 3, 5, 7, 9, 13-16, Sturman teaches the control system of claim 1, wherein the sensing circuit comprises a voltage or current measurement circuit coupled to the common line and control line (See Fig. 8 or 10, element 36 at port 6 is the on/off switch, there is a ground and control line coupled). While applicant may call the circuit a voltage or current measurement circuit, the claim does not require measurement of any voltage or current. Clearly Sturman provides for the microcomputer acknowledging a voltage or current or lack thereof, and therefore zero or not zero voltage or current.

Referring to claims 8, 10, Sturman teaches the control system of claim 7, wherein the current measurement circuit comprises an inductively coupled current detector *or* an in-line resistor (See figs. 8 or 10, the resistor at element 36).

Referring to claim 17, Sturman teaches a method for controlling an automatic sprinkler system comprising: providing a secondary controller and coupling a relay of the secondary controller in series with a common line of the automatic sprinkler system (Fig. 8, element 36); monitoring the common line with the secondary controller to determine an on-off duration of an irrigation zone (See lower left circuit of Fig. 8 or 10, at element 36, the open switch has no voltage or current connected and therefore, in the closed circuit, the resistor is a wire and the monitoring of the switch is monitoring the common ground; Col. 8, lines 18-56; Figs. 8 and 9a, element 36); receiving control data with the secondary controller used to determine a desired duration of the irrigation zone, the desired duration being equal to or less than the on-off duration of the irrigation zone (column 9 or column 8 or claims 1-7, if the programmed duration is to be skipped, it is less than the on-off duration programmed, i.e., duration of zero); turning on the relay to enable the irrigation zone and turning off the relay in response to the control data to disable the irrigation zone so that the irrigation zone is turned on for the desired duration (Figs. 8 or 10; Col. 6, lines 40-41; Col. 6, line 40 – Col. 7, line 42; Col. 11, claims 1-7).

Referring to claim 18, Sturman teaches the method of claim 17, wherein the turning off the relay in response to the control data to disable the first irrigation zone so that the first irrigation zone is turned on for the first desired duration occurs at a beginning of the on-off duration so as to prevent the irrigation in the first irrigation zone (column 9 or column 8 or

claims 1-7, if the programmed duration is to be skipped, it is less than the on-off duration programmed, i.e., duration of zero).

Referring to claims 19 and 20, Sturman teaches the method of claim 17, wherein the monitoring the common line with the secondary controller to determine an on-off duration of an irrigation zone comprises: coupling a measurement unit to the common or control line of the automatic sprinkler system, the measurement unit being a voltage or current measurement unit (See Fig. 8 or 10, element 36 at port 6 is the on/off switch, there is a ground and control line coupled).

Referring to claim 21, Sturman teaches the method claim 17, wherein the monitoring the common line with the secondary controller to determine an on-off duration of an irrigation zone comprises: monitoring the common line to determine the programming of the irrigation zone, the programming including the start time (See fig. 9a, store start watering time), the duration (See fig. 9a, store stop watering time), and the irrigation frequency of the irrigation zone (Col. 15, lines 5-10).

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

9. Claims 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 4,811,221 to Sturman as applied to claims 1-3, 5, and 7-21 above, and further in view of U.S. Pat. No. 4,112,670 to Morozumi.

Referring to claims 4 and 6, Sturman teaches all the limitations set forth above, however, fails to teach that the voltage measurement circuit, that is not even required to measure any voltage, comprises a transistor *or* an operational amplifier.

However, referring to claims 4 and 6, Morozumi teaches analogous art, wherein a voltage measurement circuit comprises a transistor *or* an operational amplifier (Col. 12, lines 64-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the teachings of Sturman with the teachings of Morozumi.

One of ordinary skill in the art would have been motivated to combine these references because Morozumi teaches a transistor can be used for effecting measurement of a voltage (Col. 12, lines 64-67). Furthermore, Morozumi teaches that by using the transistor, improved operation and reduced size of a timekeeping device is obtained, and flexible applicability is provided (Col. 9, lines 36-46).

Response to Amendment

10. The amendment filed June 22nd 2005 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: U.S. Provisional Patent Application 60/421,963. Applicant is required to cancel the new matter in the reply to this Office Action.

Response to Arguments

Applicant's arguments filed June 22nd 2005 have been fully considered but they are not persuasive.

Art Unit: 2125

11. Referring to claims 1-21, applicant argues that paragraph 0001 has been amended to claim priority to U.S. Provisional Patent Application 60/421,963 filed October 28th 2002, and since U.S. Pub. No. 2004/0090329 to Hitt, U.S. Pub. No. 2004/0090345 to Hitt, and U.S. Pub. No. 2004/0100394 to Hitt all claim priority from the same provisional application, these cited publications were not invented “by another” as required by section 102(e). The examiner respectfully disagrees.

The examiner respectfully submits that applicant has not complied with the conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 119(e), because the specific reference to the prior application must be submitted during the pendency of the application and within the later of four months from the actual filing date of the application or sixteen months from the filing date of the prior application. See 37 CFR 1.78(a)(2)(ii) and (a)(5)(ii). U.S. Provisional Patent Application 60/421,963 was filed October 28th 2002 and the specific reference to U.S. Provisional Patent Application 60/421,963 was filed June 22nd 2005, more than 16 months from the filing date of the prior application. This time period is not extendable and a failure to submit the reference required by 35 U.S.C. 119(e) and/or 120, where applicable, within this time period is considered a waiver of any benefit of such prior application(s) under 35 U.S.C. 119(e), 120, 121 and 365(c). A benefit claim filed after the required time period may be accepted if it is accompanied by a grantable petition to accept an unintentionally delayed benefit claim under 35 U.S.C. 119(e), 120, 121 and 365(c). The amendment filed June 22nd 2005 fails to provide any such petition. The petition must be accompanied by (1) the reference required by 35 U.S.C. 120 or 119(e) and 37 CFR 1.78(a)(2) or (a)(5) to the prior application (unless previously submitted), (2) a surcharge under 37 CFR 1.17(t), and (3) a statement that the entire delay

between the date the claim was due under 37 CFR 1.78(a)(2) or (a)(5) and the date the claim was filed was unintentional. The Director may require additional information where there is a question whether the delay was unintentional. The petition should be addressed to: Mail Stop Petition, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

12. Referring to claim 1, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., both an automatic sprinkler system having an irrigation controller and a control system (See pages 20-22 of the amendment filed June 22nd 2005); a sensing circuit of the controller that is coupled to detect an assertion and deassertion of the first valve by the irrigation controller (See first paragraph of page 21 of the amendment filed June 22nd 2005)) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

13. Referring to claim 11, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., both an automatic sprinkler system having an irrigation controller and a control system (See pages 20-22 of the amendment filed June 22nd 2005)) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

14. Referring to claim 11, applicant argues that Sturman fails to teach a sensing circuit of the control system coupled to detect an assertion and deassertion of the first valve by the irrigation controller. The examiner respectfully disagrees.

Sturman clearly teaches that during programming the microcomputer detects whether or not the on/off switch 36 is a first switch depression (a valve turn on signal) or a second switch depression (a valve turn off signal) (Col. 8, lines 18-56; Figs. 8 and 9a, element 36).

The examiner respectfully submits that detecting whether there is a valve turn on signal or a valve turn off signal by element 36 is a sensing circuit of the control system coupled to detect an assertion and deassertion of the first valve by the irrigation controller.

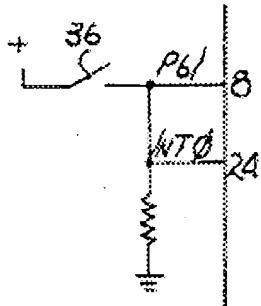
15. Referring to claim 17, applicant argues that Sturman fails to teach both an irrigation controller and a secondary controller. The examiner respectfully disagrees.

Either of elements 36, 38, or 210 of figures 8 and 10 read on the limitation of a secondary controller. The microcomputer 150 reads on an irrigation controller. The examiner also respectfully notes that the instant specification teaches a user interface node for control.

16. Referring to claim 17, applicant argues that Sturman fails to teach monitoring the common line with a secondary controller. The examiner respectfully disagrees.

Sturman clearly teaches control circuit 36 connected in series with a common line of the microcomputer 150. Clearly the open switch has no voltage or current connected and therefore, in the open circuit, the resistor is a wire and the monitoring of the switch is monitoring the common ground. The same holds true for element 38, see figure 8.

Art Unit: 2125



Conclusion

17. The prior art or art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents or publications are cited to further show the state of the art with respect to an irrigation control system with multiple controllers.

U.S. Pat/Pub. No. 4,270,573 to Sturman.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean P. Shechtman whose telephone number is (571) 272-3754. The examiner can normally be reached on 9:30am-6:00pm, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo P. Picard can be reached on (571) 272-3749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Art Unit: 2125

SPS

Sean P. Shechtman

July 16, 2005

Albert W. Paladini 7-19-05
ALBERT W. PALADINI
PRIMARY EXAMINER